

Testbed Roundup

Hydrometeorology Testbed (HMT) Roundup

Allen White

Abstract

NOAA's Hydrometeorology Testbed (HMT; hmt.noaa.gov and <http://www.hpc.ncep.noaa.gov/hmt/>) conducts research on precipitation and weather conditions that can lead to flooding, and fosters transition of scientific advances and new tools into forecasting operations. At the NWS Weather Prediction Center (WPC), HMT accelerates the assessment and implementation of new technology, research results, and other scientific advancements from the research and development communities to enhance WPC products and services. This talk will summarize HMT's core science objectives and programmatic structure along with recent accomplishments (see below) and future work.

HMT-West Legacy: A comprehensive observing and atmospheric/hydrologic numerical modeling project in coordination with the California Department of Water Resources.

HMT-Southeast Pilot Study (HMT-SEPS): A joint NASA/NOAA project focused on quantitative precipitation estimation and forecasting. NASA's interests are in satellite calibration and validation for the new Global Precipitation Measurement mission launched this year.

2013 WPC Flash Flood and Intense Rainfall (FFaIR) Experiment: An inaugural project where forecasters, researchers, and model developers worked together as a collaborative forecast team to explore the challenges associated with issuing short-term QPF and flash flood forecasts.

2013 Winter Weather Experiment: A project to explore the challenges of probabilistic winter weather forecasting. The experiment focused on the use of ensemble systems to help quantify and communicate uncertainty in winter weather forecasts.

CalWater II: A multi-year field campaign built upon HMT to study the impacts of aerosols on precipitation and the origin and modulation of atmospheric rivers over the western Pacific.

Sonoma County Water Agency – Phase II: A three-year project led by HMT to improve quantitative precipitation information and frost forecasts for water resource management on the Russian River watershed.

NOAA's Habitat Blueprint: The Russian River watershed has been selected as the first Habitat Focus Area under NOAA's Habitat Blueprint. This is an important step to increase the effectiveness of NOAA's habitat conservation science and management efforts by identifying places where NOAA offices work together to meet multiple habitat conservation objectives on a watershed scale. HMT leads three of the initial five Blueprint pilot projects.